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DEC 05 2003

TC 1700

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characteristics of the present alloy” and thus the prior art Sato reference reads on the claims. In addition, the Examiner asserts that the Ag-alloy envelop material of the current invention is no different from Sato et al. According to the Examiner the inclusion of the limitation that internal oxidation is performed at 3-10 atm at 700°C-800°C does not make the Ag-alloy different from the prior art Sato et al.

Applicant submits that although Sato et al discloses a heat treatment of an Ag-alloy, which includes Magnesium (Mg) and Nickel (Ni), the reference does not teach performing internal oxidation of the Ag-alloy at pressures of 3-10atm. The alloys of the present claims, in which the Ag-alloy is internally oxidized at 3-10atm has superior properties in terms of mechanical strength. In a declaration under 37 C.F.R. §1.132 submitted herewith the mechanical strength properties were determined in a comparative test between the composition of the current invention and the prior art Sato et al composition. The mechanical strength properties measured were the Young’s Modulus, the 0.2% proof stress, and the tensile strength. Table 1 of the declaration shows that the mechanical strength properties for the composition according to the current invention are 77.2 GPa (Young’s Modulus), 595 MPa (0.2% proof stress) and 632 MPa (tensile strength) compared to 81.2 GPa, 384 MPa and 435 MPa respectively for the prior art Sato et al material. Although the composition according to the current invention incorporated a lower percentage of Mg than the prior art Sato et al material, it showed superior mechanical strength properties. Thus as the composition according to the current invention has superior mechanical strength properties over the prior art compositions, the current claimed invention is different from the Ag-alloys according to Sato et al. Moreover, the observed internal oxidation

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advancement velocity coefficient D differed significantly between the composition according to the present invention ($D = 73.981 \times 10^{-6} \text{ mm}^2 \cdot \text{s}$) compared to the prior art Sato et al ($D = 6.420 \times 10^{-6} \text{ mm}^2 \cdot \text{s}$).

In addition, persons of ordinary skill in the art would have expected an Ag-alloy with a higher percentage of Mg incorporated into the alloy to exhibit increased mechanical strength. Thus in addition to exhibiting superior mechanical strength it was unexpected that the composition according to the current invention with lower levels of Mg would have such superior properties.

Therefore, the composition of the current invention, in addition to exhibiting unexpectedly improved results, is very different from the composition as taught by Sato et al. Accordingly, Applicant respectfully submits that the claimed invention of claims 1, 4 and 5 is not anticipated by Sato et al (JP 09-115355). Withdrawal of the rejection is respectfully requested.

Claims 1, 4 and 5 were rejected under 35 U.S.C. §103(a) as unpatentable over Tenbrink et al. (JP 06-045132) in view of applicant's own admission. According to the Examiner Tenbrink teaches an Ag-oxide composite material, which Tenbrink discloses to contain 0.1-0.25 wt%, in terms of elemental metal, of an oxide of Mg and 0.1-0.25 wt%, in terms of elemental metal, of an oxide of Ni. The Examiner further asserts that the reference teaches that the alloy is subjected to dispersion hardening by oxidation. Further, according to the Examiner applicants have admitted in the specification that auxiliary material for use with a superconductive material is formed into a tape or pipe and then a multilayer composite structure is formed wherein Ag-metal oxide composites have been used as a superconductor auxiliary material. Therefore, according to the

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Examiner it would have been obvious to utilize the Ag-metal oxide composite material of Tenbrink for the superconductor auxiliary material because Tenbrink provides an alloy with a coefficient of thermal expansion matched for use with a ceramic compound wire rod. The Examiner further asserts that the inclusion of the limitation that internal oxidation is performed at 3-10 atm at 700-800°C does not make the Ag-alloy different from the prior art.

Applicant submits that Tenbrink teaches an Ag-alloy material which is heat treated. However, Tenbrink does not teach or suggest performing the heat treatment at an increased pressure of 3 to 10 atm. Furthermore, applicant submits that the Ag-alloy according to the current invention has superior mechanical strength properties. As discussed above, the attached declaration, submitted herewith under 37 C.F.R. §1.132, shows that the mechanical strength properties of the composition according to the current invention are superior compared to the prior art composition. Moreover, it shows that unexpectedly the mechanical strength is improved despite using a lower percentage of Mg in the composition of the current invention. Thus the process of internal oxidation at 3-10 atm for the composition according to the current invention results in superior mechanical strength properties, which is not taught or suggested by Tenbrink et al. The statements by applicant regarding the known usefulness of Ag-alloys in auxiliary material for superconductive material in the form of a rod or pipe does not cure the deficiencies of Tenbrink et al with respect to teaching or suggesting the improved mechanical strength properties of the Ag-alloy according to the current invention.

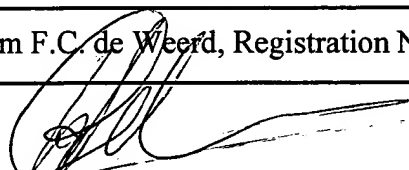
Applicant respectfully submits that the claimed invention of claims 1 and 4, therefore, is not obvious over Tenbrink et al (JP 06-045132) combined with applicant's own statements in the

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specification. In addition, as claim 5 is dependent from claim 1, applicants submit that the composite material in claim 5 is not obvious by virtue of its dependency of claim 1. Withdrawal of the rejection is respectfully requested.

Applicants submit that the present application is now in condition for allowance.

Reconsideration and favorable action are earnestly requested.

RESPECTFULLY SUBMITTED,					
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